

1. PRODUCT NAME, NUMBER, SYNONYM: Perliton Liquid Heat
2. MANUFACTURER'S NAME: E. F. Houghton & Company
3. MANUFACTURER'S ADDRESS: 303 West Lehigh Avenue, Philadelphia, Pennsylvania 19133
4. PROCEDURE IN CASE OF BREAKAGE OR LEAKAGE: Gather into a dry container.
See Attached instruction for disposal.
5. TRANSPORTATION AND STORAGE REQUIREMENTS: Store in a dry place, avoid contact
with acids. See attached container labels.
6. FIRST AID TREATMENT:
 - A. SKIN CONTACT: See instruction on attached warning label, consult
physician immediately.
 - B. EYE CONTACT: Same as 6A
 - C. INHALATION: Same as 6A
 - D. ANTIDOTE IN CASE OF SWALLOWING: Same as 6A
7. PHYSIOLOGICAL PROPERTIES:
 - A. ACUTE ORAL TOXICITY: Highly toxic, contains Cyanide and Barium
Carbonate.
 - B. LOCAL EFFECTS UPON EYES: Major injury may result to the eyes.
 - C. LOCAL EFFECTS UPON SKIN: In heat form, may be irritating. Will cause serious
burns in the molten state.
 - D. ESTIMATE OF ACUTE HAZARD BY INHALATION (VOLATILE MATERIALS): Non-Volatile when dry.
Avoid inhalation when in neat form.
 - E. WARNING PROPERTIES (ODOR, IRRITATION TO EYES, NOSE OR THROAT): Typical Cyanide odor.
See Labels.
 - F. ESTIMATED THRESHOLD LIMIT VALUE (IF NOT ON CURRENT LIST BY AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL
HYGIENISTS): 5 mgs. per cubic meter of air for cyanide (as CN) - skin
8. CHEMICAL AND PHYSICAL PROPERTIES:
 - A. SPECIFIC GRAVITY (WATER = 1) n/a
 - B. VAPOR DENSITY (AIR = 1) n/a
 - C. VAPOR PRESSURE mm Hg AT 25°C. n/a
 - D. pH n/a
 - E. CORROSIVE ACTION ON COMMON MATERIALS SUCH AS: ALUMINUM, MAGNESIUM, PLEXIGLAS, RUBBER, LACQUERS, ENAMELS, FABRICS:
In molten state, for use on steel only.

F. DOES THE MATERIAL DECOMPOSE WHEN EXPOSED TO AIR? WATER? HEAT? STRONG OXIDIZERS? Keep Away From Water, Organic Material And Strong Oxidizers.

G. FOR MIXTURES GIVE THE PERCENTAGE COMPOSITION OF INGREDIENTS:

COMPOUND	PERCENT
Sodium Cyanide	30-45
Barium Carbonate	30-45
Sodium Chloride	25-40
Blue Dye	Less than 5%

NOTE: GENERALIZATIONS SUCH AS PETROLEUM HYDROCARBONS, ALCOHOL, KETONES, CHLORINATED HYDROCARBONS, ETC., ARE NOT ADEQUATE FOR TOXICOLOGICAL EVALUATION. PROPER CHEMICAL NAMES MUST BE KNOWN.

H. DOES THE MATERIAL GENERATE HEAT THROUGH POLYMERIZATION OR CONDENSATION? no

9. PRECAUTIONS FOR NORMAL CONDITIONS OF USE: Do not mix with nitrate or nitrite salts under any circumstances, explosion may result. Avoid contact with water. Keep away from strong oxidizers and organic material. Observe precautions on the labels.

10. RECOMMENDED PROTECTIVE EQUIPMENT: Use face shield or goggles, asbestos gloves. Use respirator to avoid inhalation. Provide ample ventilation.

11. A. FLASHPOINT °F: CLOSED CUP n/a; OPEN CUP _____; IF F.P. CHANGES DURING EVAPORATION GIVE DATA: _____

B. EXPLOSIVE LIMITS (% VOL. AIR): LOWER n/a; UPPER _____

C. SUSCEPTIBILITY TO SPONTANEOUS HEATINGS: YES _____; NO X

D. FIRE POINT °F n/a; AUTO IGNITION TEMPERATURE °F n/a

E. VAPOR DENSITY n/a

F. WHAT PRODUCTS MIGHT BE FORMED IN THE EVENT OF FIRE OR ABNORMAL TEMPERATURES? None
Product is used in heat treating.

G. SUITABLE EXTINGUISHING AGENTS: n/a

12. INFORMATION FURNISHED BY:

E. F. HOUGHTON & CO.
TITLE: COMMITTEE ON PRODUCT TOXICOLOGY
COMPANY: AND SAFE HANDLING
ADDRESS: ELLIS ABRAMS - Manager of Research
H. H. DALSKE - Quality Control Manager
DATE: W. H. MILLETT - General Product Manager

NOTE: INFORMATION IN REGARD TO A MATERIAL'S COMPOSITION WILL BE USED FOR THE PURPOSE OF COMPLYING WITH LOCAL, STATE AND FEDERAL ORDINANCES, LAWS AND CODES, AND REQUIREMENTS OF GOVERNMENTAL AGENCIES.

THE COMPLETED FORM SHOULD BE RETURNED TO PURCHASING, DOUGLAS AIRCRAFT DIVISION, LONG BEACH, CALIF. 90801.

E. F. HOUGHTON & CO.



THE HOUGHTON LINE
OILS · · CHEMICALS · · PACKINGS

303 WEST LEHIGH AVENUE · · PHILADELPHIA, PA. 19133

February 2, 1972

Douglas Aircraft Company
3855 Lakewood Boulevard
Long Beach, California 90801

Attention: A. W. Wildanger, Safety Engineer

Gentlemen:

Enclosed is the information you requested concerning toxicological
and safe handling data for our product Perliton Liquid Heat.

We hope that this information proves helpful to you.

Sincerely,

E. F. HOUGHTON & CO.

C. R. Heinlen, Manager
Technical Information Services

4
LJG

Houghton's **PERLITON LIQUID HEAT**

Reg. U. S. Pat. Off.

POISONOUS SOLIDS N. O. S.

MELTING POINT—1220° F.

WORKING RANGE—1350°-1675° F.

DANGER

Under no condition allow the temperature of the bath to exceed working range shown above.

A salt bath material for liquid carburizing.

Consult the Houghton man for use and application.

STORE IN DRY PLACE!

This material must not be permitted to become damp. When ready to use, make sure it is dry.

DIRECTIONS FOR USE

Add in small quantities to the molten bath. When melting a fresh batch do not force the heat.

Melt down slowly.

6-324-1A 2M 5/64

E. F. HOUGHTON & CO.

PHILADELPHIA

CARROLLTON, GA.

CHICAGO

DETROIT

SAN FRANCISCO

POISON

WARNING!

POISON

**CONTACT WITH ACID
LIBERATES
POISONOUS GAS**

Avoid breathing gas or dust. Avoid skin contact. Keep away from feed or food products. Keep container closed and store in dry place.



**DO NOT USE IN POTS FORMERLY
USED FOR SALTS CONTAINING
NITRATES OR NITRITES**

Do not submit parts treated in this material to further treatment in salt baths containing nitrates or nitrites unless parts have been thoroughly cleaned.

**THIS PRODUCT CONTAINS
CYANIDE**

FIRST AID TREATMENT

Carry patient to fresh air. Have him lie down. Remove contaminated clothing, but keep patient warm. Start the following First Aid Treatment immediately and CALL A PHYSICIAN.

If patient is conscious and breathing:

- (1) Break an amyl nitrite pearl in a cloth and hold lightly over the nose for not more than 15-20 seconds. Repeat every 5 minutes for 25 minutes if recovery is not forthcoming.
- (2) If this product has been SWALLOWED, give patient one pint of 1% Sodium Thiosulphate solution (or soapy water or mustard water) by mouth every 15 minutes until vomiting occurs.

If patient has stopped breathing:

Give artificial respiration until breathing starts. Break an amyl nitrite pearl in a cloth and hold lightly over nose for not more than 20 seconds, repeating every 5 minutes for 25 minutes or until breathing starts.

If patient is unconscious but breathing:

Break an amyl nitrite pearl in a cloth and hold lightly over nose for not more than 20 seconds, repeating every 5 minutes for 25 minutes if recovery is not forthcoming. Give oxygen from an inhalator.

Never give anything by mouth to an unconscious person. In all cases, keep patient quiet and warm until a physician arrives.

E. F. HOUGHTON & CO., Philadelphia
Chicago • Detroit • South San Francisco

6-284-A

Houghton's PERLITON 45

Reg. U.S. Pat. Off.

PATENTED IN U.S. & FOREIGN COUNTRIES

MELTING POINT—1210°F

WORKING RANGE—1380°-1575°F

DANGER

Under no condition allow the temperature of the bath to exceed working range shown above.

A salt bath material for liquid carbonizing.

Consult the Houghton men for use and application.

STORE IN DRY PLACE!

This material must not be permitted to become damp. When ready to use, make sure it is dry.

DIRECTIONS FOR USE

Add in small quantities to the molten bath. When melting a fresh batch do not force the heat.

Melt down slowly.

E. F. HOUGHTON & CO.

PHILADELPHIA

CARROLLTON, GA.

CHICAGO

DETROIT

SAN FRANCISCO



WARNING
KEEP AWAY from FEED or FOOD PRODUCTS

POISON

CAUTION—DO NOT DROP

IF
LEAKING

DON'T

BREATHE FUMES
TOUCH CONTENTS
SWALLOW

This is to certify that the contents of this package are properly described by name and are packed and marked and are in proper condition for transportation according to the regulations described by the Interstate Commerce Commission

E. F. HOUGHTON
& COMPANY
PHILADELPHIA,
PA.

6-318

POISON

WARNING!

POISON

**CONTACT WITH ACID
LIBERATES**

POISONOUS GAS

Avoid breathing gas or dust. Avoid skin contact. Keep away from feed or food products. Keep container closed and store in dry place.



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NITRATES OR NITRITES**

Do not submit parts treated in this material to further treatment in salt baths containing nitrates or nitrites unless parts have been thoroughly cleaned.

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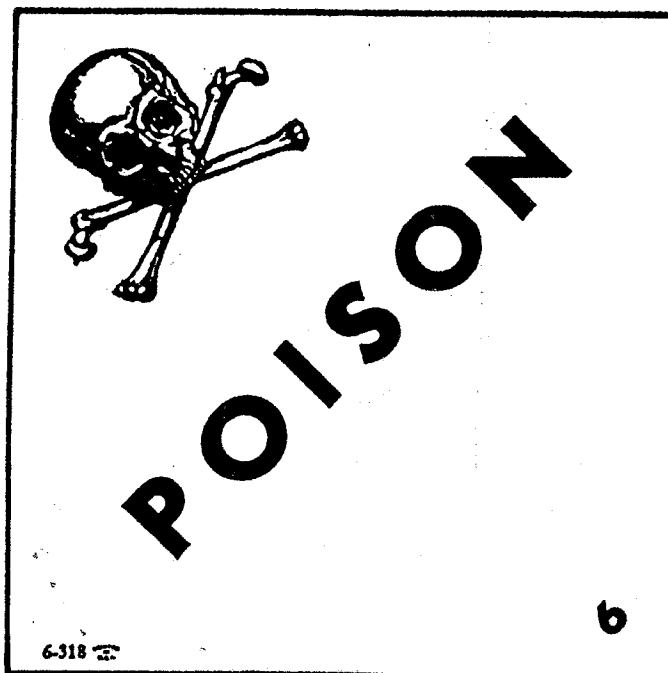
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E. F. HOUGHTON & CO., Philadelphia
Chicago • Detroit • South San Francisco

6-284-A



6-318



April 21, 1977

Douglass Aircraft Company
3855 Lakewood Blvd.
Long Beach, Ca. 90846

Attention: Mr. M. J. Veneroso
Materials Handling &
Packaging Engineering

Gentlemen:

Your letter of March 30, 1977, to our Santa Ana plant has been forwarded to the writer with the request to furnish you with the information you desire.

Two of these products, Hocut 237 and Cosmoline 1062 are not regulated. We classify them as the following for shipping:

M 342	— Hocut 237	-	Metal Cutting Compound
M 672	— Cosmoline 1062	-	Petroleum Lubricating Oil NOI or Grease

Lubricant 949 is not our product.

I have listed below the proper shipping classification for the other products.

	<u>Proper Shipping Name</u>	<u>Hazard</u>
7/22/ — Cosmoline 1091	Combustible Liquid NOI	Combustible Liquid
7/665 — Cosmoline 1102	Combustible Liquid NOI	Combustible Liquid
7/673 — Cosmoline 1104	Combustible Liquid NOI	Combustible Liquid

For Air - Article No. 1939
Flash Point - 105° F for all three
Pensky Martin Closed Cup

DPM 950-8
Perliten 45 - Cyanide or Cyanide Mixtures Dry Poison B

For Air - Article No. 544
Requires Poison Label

I have also enclosed our standard Material Safety Data Sheets for all of these products.

If you have any further questions, please feel free to contact the writer.

Sincerely,

E. F. Houghton & Company

Frank J. Roth

Frank J. Roth
Product Safety Manager

FJR/atd
Attachments